

## Section 6: Economic Analysis

### Introduction:

The following economic analysis was conducted using the guidance in Appendix 5. The Analysis provides a starting point for the Jefferson County Wildland/Urban Interface Fire Mitigation Group and the responsible fire districts to begin mitigation project prioritization. It should be noted that while some projects provide an excellent return on investment, other factors should be strongly considered and be included in the prioritization process. Life safety issues must always take precedence over costs. Other issues include:

- ✓ The number of structures in the subdivision
- ✓ The number of calls experienced in the area by the fire district
- ✓ Past fire history
- ✓ Seasonal use patterns
- ✓ Availability of funds
- ✓ Commitment and involvement of property owners
- ✓ Property aesthetics
- ✓ Environmental impacts
- ✓ Wildlife impacts

### Vulnerability Zone Project Economic Analysis:

The following analysis was conducted based on a brief description of the project and the assumptions used to determine the scope and rough order of magnitude cost for the project. The information provided serves as a foundation for project prioritization and resource allocation. Detailed cost estimates may be required for grant applications

### General Issues

- ✓ *Develop a rural subdivision water supply building code.*

Project Description – Examine current Jefferson County subdivision plat development codes and determine appropriate requirements that ensure adequate water supplies for fire suppression.

Assumption – This activity will occur through the normal operations and interface between the fire chief and the planning and zoning staff. No additional cost will be incurred.

- Cost - None
- Valuation – N/A
- ROI –N/A

Responsible Party: Central Fire District

Resources: Operations Budgets

Due Date:

- ✓ *Develop defensible space programs around CRP Lands.*

Project Description – The individual property owners, working with the Central Fire District and NRCS will establish defensible space actions. The cost of implementation is born directly by the property owner.

Assumptions: It is assumed that creation of defensible space costs \$3,000 an acre. The number of acres needed for treatment is TBD for this item and therefore a ROI cannot be calculated.

- Cost - \$3,000 per acre X #Acres TBD
- Valuation – TBD
- ROI – TBD

Responsible Party: Roberts Fire District

Resources: BLM Community at Risk Program

Due Date:

### **Heise/Lorenzo Riparian Area – WUI Vulnerability Zone 1**

- ✓ *Develop a wildland/urban interface public education program.*
- ✓ *Develop an evacuation plan.*

Project Description – The Central District will conduct public education meetings for property owners in the WUI Zone. Educational materials will be provided. This project will be integrated with development of an evacuation program and will include WUI Zones 1 and 3.

Assumptions – The integrated program cost would be \$5,000 for this zone. If the program saved one home because of actions of the homeowner, the ROI would be based on the cost divided into the value of the average property in the subdivision.

- Cost - \$5,000 (this zone)
- Valuation – \$76,529 avg. property value
- ROI – 15.3 : 1

Responsible Party: Central Fire District

Resources: BLM Community at Risk Program, FEMA Fire Prevention Grant

Due Date:

- ✓ *Develop a fuels reduction program.*
- ✓ *Apply for grants to procure equipment used for mechanical treatment projects.*

Project Description – The Central Fire District will assist property owners in the development of a firewise/fuel reduction program. The project shall include mechanical treatments of properties within a 90' radius of structures and will be based on both removal of fuels and the insertion of appropriate types of landscaping. Two mitigation projects will be integrated together, the development of the fuel reduction program and the procurement of the equipment to support the project.

Assumptions – The cost per acre for mechanical treatment is \$3,000, assume a 90' treatment area would include work on only 1 acre or less of property and assume the average property value for the subdivision. The cost of the procurement of the equipment would be divided equally between all properties treated. The cost for the mechanical treatment equipment is estimated at \$10-15,000 divided by the number of properties treated.

- Cost – \$3,000 per acre/\$125.00 est. equipment cost per property
- Valuation - \$76,529 avg. property value
- ROI – 25.5 : 1

Responsible Party: Central Fire District

Resources: IDL/Forest Service Stevens Grant, BLM Community at Risk Program

Due Date:

- ✓ *Develop a static water source.*

Project Description – The Central Fire District, along with property owners will work together to apply for grant funding to install three (3) 10,000-gallon underground static water tanks in the major subdivisions.

Assumption – The cost for a 10,000-gallon water tank buried below the frost line is \$10,000. The State of Idaho Ratings Bureau requires a flow rate of 250 gallons a minute for two hours or a capacity of 30,000 gallons of water storage. Estimating 3 major subdivisions.

- Cost – \$30,000 each set of tanks
- Valuation – \$76,529 avg. property value
- ROI – 2.6 : 1

Responsible Party: Central Fire District

Resources: FEMA Assistance to Fire Fighters Grant

Due Date:

#### **Roberts Riparian Area – WUI Vulnerability Zone 2**

- ✓ *Develop a wildland/urban interface public education program.*
- ✓ *Develop an evacuation plan.*

Project Description – The Roberts District will conduct public education meetings for property owners in the WUI Zone. Educational materials will be provided. This project will be integrated with development of an evacuation program.

Assumptions – The integrated program cost would be \$5,000 for this zone. If the program saved one home because of actions of the homeowner, the ROI would be based on the cost divided into the value of the average property in the subdivision.

- Cost - \$5,000 (this zone)
- Valuation – \$78,378 avg. property value
- ROI –15.7 : 1

Responsible Party: Roberts Fire District

Resources: BLM Community at Risk Program, FEMA Fire Prevention Grant

Due Date:

- ✓ *Develop a fuels reduction program.*
- ✓ *Apply for grants to procure equipment used for mechanical treatment projects.*

Project Description – The Roberts Fire District will assist property owners in the development of a firewise/fuel reduction program. The project shall include mechanical treatments of properties within a 90' radius of structures and will be based on both removal of fuels and the insertion of appropriate types

of landscaping. Two mitigation projects will be integrated together, the development of the fuel reduction program and the procurement of the equipment to support the project.

Assumptions – The cost per acre for mechanical treatment is \$3,000, assume a 90’ treatment area would include work on only 1 acre or less of property and assume the average property value for the subdivision. The cost of the procurement of the equipment would be divided equally between all properties treated. The cost for the mechanical treatment equipment is estimated at \$10-15,000 divided by the number of properties treated.

- Cost – \$3,000 per acre/\$125.00 est. equipment cost per property
- Valuation - \$78,378 avg. property value
- ROI – 26.1 : 1

Responsible Party: Roberts Fire District  
Resources: IDL, BLM Community at Risk Program  
Due Date:

✓ *Develop a static water source.*

Project Description – The Roberts Fire District, along with property owners will work together to apply for grant funding to install three (3) 10,000-gallon underground static water tanks in the major subdivisions.

Assumption – The cost for a 10,000-gallon water tank buried below the frost line is \$10,000. The State of Idaho Ratings Bureau requires a flow rate of 250 gallons a minute for two hours or a capacity of 30,000 gallons of water storage.

- Cost – \$30,000 each set of tanks
- Valuation – \$78,378 avg. property value
- ROI – 2.6 : 1

Responsible Party: Roberts Fire District  
Resources: FEMA Assistance to Fire Fighters Grant  
Due Date:

### **Menan/Deer Park Wildlife Mitigation Unit – WUI Vulnerability Zone 3**

- ✓ *Develop a wildland/urban interface public education program.*
- ✓ *Develop an evacuation plan.*

Project Description – The Central District will conduct public education meetings for property owners in the WUI Zone. Educational materials will be provided. This project will be integrated with development of an evacuation program and will include WUI Zones 1 and 3.

Assumptions – The integrated program cost would be \$5,000 for this zone. If the program saved one home because of actions of the homeowner, the ROI would be based on the cost divided into the value of the average property in the subdivision.

- Cost - \$5,000 (this zone)
- Valuation – \$61,763 avg. property value
- ROI – 12.4 : 1

Responsible Party: Central Fire District

Resources: BLM Community at Risk Program, FEMA Fire Prevention Grant

Due Date:

- ✓ *Develop a fuels reduction program.*
- ✓ *Apply for grants to procure equipment used for mechanical treatment projects.*

Project Description – The Central Fire District will assist property owners in the development of a firewise/fuel reduction program. The project shall include mechanical treatments of properties within a 90' radius of structures and will be based on both removal of fuels and the insertion of appropriate types of landscaping. Two mitigation projects will be integrated together, the development of the fuel reduction program and the procurement of the equipment to support the project.

Assumptions – The cost per acre for mechanical treatment is \$3,000, assume a 90' treatment area would include work on only 1 acre or less of property and assume the average property value for the subdivision. The cost for the procurement of the equipment would be divided equally between all properties treated. The cost for the mechanical treatment equipment is estimated at \$10-15,000 divided by the number of properties treated.

- Cost – \$3,000 per acre/\$125.00 est. equipment cost per property
- Valuation - \$61,763 avg. property value
- ROI – 20.6 : 1

Responsible Party: Central Fire District

Resources: IDL/Forest Service Stevens Grant, BLM Community at Risk Program

Due Date:

- ✓ *Develop a static water source.*

Project Description – The Central Fire District, along with property owners will work together to apply for grant funding to install three (3) 10,000-gallon underground static water tanks in the major subdivisions.

Assumption – The cost for a 10,000-gallon water tank buried below the frost line is \$10,000. The State of Idaho Ratings Bureau requires a flow rate of 250 gallons a minute for two hours or a capacity of 30,000 gallons of water storage. Estimating 3 major subdivisions.

- Cost – \$30,000 each set of tanks
- Valuation – \$61,763 avg. property value
- ROI – 2.1 : 1

Responsible Party: Central Fire District

Resources: FEMA Assistance to Fire Fighters Grant

Due Date:

#### **Market Lake Wildlife Management Area – WUI Vulnerability Zone 4**

- ✓ *Develop Public Education Program and develop evacuation procedures.*

Project Description – The Idaho Fish and Game Management will develop evacuation routes and supporting signage for the Market Lake public areas.

Assumptions: The IFG will close roadways that are not safe for public use and will designate roadways for access and for evacuation routes.

- Cost – To be determined by IFG
- Valuation – N/A Public Access and Recreational Uses Only
- ROI – N/A Safety Issue

Responsible Party: IFG

Resources: BLM Operating Funds

Due Date:

#### **Mud Lake Wildlife Management Area – WUI Vulnerability Zone 5**

- ✓ *Develop Public Education Program and develop evacuation procedures.*

Project Description – The Idaho Fish and Game Management will develop evacuation routes and supporting signage for the Market Lake public areas.

Assumptions: The IFG will close roadways that are not safe for public use and will designate roadways for access and for evacuation routes.

- Cost – To be determined by IFG
- Valuation – N/A Public Access and Recreational Uses Only
- ROI – N/A Safety Issue

Responsible Party: IFG

Resources: BLM Operating Funds

Due Date: